

High-Resolution Thermal Imaging with Gemini of the β Pic Central Disk

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We present new mid-IR images of the central 200 AU of the archetypal debris disk associated with β Pictoris. Obtained last December and January with the newly commissioned facility instrument T-ReCS at five wavelengths between 8 and 25 μm , these images exhibit complex structure that varies with wavelength. First, we see that the wing asymmetry decreases at longer wavelengths, essentially disappearing at 25 μm . We also note features that may correspond to a system of rings and gaps in the disk, with a marked wavelength dependence in that morphology. Finally, we see two types of warping or twisting of the central disk ridge line that we speculate may in part be related to the interaction of the radiation-pressure-driven outflowing dust and the large-scale disk.

